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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/120,973	07/22/1998	NEHEMIA AMIR	05026.0024	2803

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EXAMINER

GRIER, LAURA A

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 07/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/120,973

Applicant(s)

AMIR, NEHEMIA

Examiner

Laura A Grier

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 28-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9, 22 and 24-27 is/are rejected.
- 7) ☒ Claim(s) 5-8, 10-21 and 23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 and 4. 6) ☐ Other: _____

Art Unit: 2644

DETAILED ACTION

1. Claims 28-54 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 10.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 9, 22, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamamura et al., U.S. Patent No. 5602927 in view of Rasmusson.

Regarding claims 1 and 27, Tamamura et al (herein, Tamamura) discloses a vehicle internal noise reduction system and the method thereof. Tamamura's disclosure comprises a microphone (15), which reads an input transducer means; a speaker (14), which reads on an output actuator means; an adaptive filter (7), which reads on an echo cancellation means, and the D/A (13) represents the antinoise means; and the microphone and the speaker are in close proximity of each other (figure 1, col. 2, lines 28-50). However, Tamamura fails to disclose a correction means. The examiner maintains that such a correction means was well known in the art.

Regarding, the correction means, in a similar field of endeavor, Rasmusson discloses an echo-canceling system and method using echo estimate to modify error signal. Rasmusson disclosure comprises a non-linear processor (col. 7, lines 59-63), which constitutes as a correction means for adjusting the input signal, compensating for non-linear characteristics of the input signal.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Tamamura by providing a correction means such as a non-linear processor for the purpose of canceling residual echo as taught by Rasmusson.

Regarding **claim 2**, Tamamura and Rasmusson disclose everything claimed as applied above (see claim 1). Tamamura further discloses a microphone (15), which represents the input transducer.

Regarding **claim 3**, Tamamura and Rasmusson disclose everything claimed as applied above (see claim 1). Tamamura further discloses a speaker (14), which represents the output actuator means.

Regarding **claim 4**, Tamamura and Rasmusson disclose everything claimed as applied above (see claim 1). Tamamura further discloses a filter coefficients recording section (1) for storing a plurality of coefficients and a tap value updating (9) and convolution section (2) coupled therein, which reads coefficients processing means and means for generating a corrected input from the coefficients of the storage means.

Regarding **claim 9**, Tamamura and Rasmusson disclose everything claimed as applied above (see claim 1). Tamamura further discloses the adaptive filter comprising digital filters

with delay tap line, an adaptation mean and summing means (figure 2, col. 2, lines 51-59 and col. 3, lines 14-36).

Regarding **claim 22**, Tamamura and Rasmusson disclose everything claimed as applied above (see claim 1). It would have been obvious that the system of claim 1 is operable to provide a controlled far field quiet zone by the fact the echo cancellation and the antinoise means enabling a noise free environment.

Regarding **claims 24 and 25**, Tamamura and Rasmusson disclose everything claimed as applied above (see claim 1). Tamamura and Rasmusson fail to specifically disclose a plurality of loudspeakers or speakers. The use of multiple loudspeakers was well known in the art. Thus it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Tamamura and Rasmusson by implementing a plurality of loudspeakers for the purpose of enhancing and/or magnifying the performance as desired of the loudspeaker(s) output.

Regarding **claim 26**, Tamamura and Rasmusson disclose everything claimed as applied above (see claim 1). However, Tamamura and Rasmusson fail to specifically disclose the microphone and the output actuator as a single input/output hybrid device. The examiner takes official notice that single input/output device comprising a microphone and loudspeaker was well known in the art. Thus it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Tamamura and Rasmusson by implementin a single input/output device or transducer for the purpose of optimizing the size of the structure for a desired performance, and as well, the use of a transducer device functioning as a microphone for input and a loudspeaker for output is a commonly used technique in the art.

4. **Claims 5-8, 10-21, and 23** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks


Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG 
July 14, 2003


PING LEE
PRIMARY EXAMINER